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Aikin, John

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THE WOODLAND COMPANION:

OR

A BRIEF DESCRIPTION

OF

BRITISH TREES.

WITH SOME ACCOUNT OF THEIR USES.

ILLUSTRATED BY PLATES.

COMPILED BY

THE AUTHOR OF EVENINGS AT HOME.

Dr. Aitkin (Doctor of medicine & writer & wife Barbauld

Welcome, ye ſhades! ye bowery thickets, hail!
Ye lofty pines! ye venerable oaks!
Ye aſhes wild, reſounding o'er the ſteep!

Thomſon.

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BLH

ADVERTISEMENT.

THE confined knowledge which young perſons, and even thoſe of advanced age, are uſually found to poſſeſs of the nobleſt products of the vegetable creation, the trees which compoſe our woods and decorate our parks and pleaſure-grounds, ſuggeſted to the writer that a brief deſcription of them, in the form of a pocket-companion of the rural walk, might be acceptable. But as words alone would be inadequate to enable any one not an adept in botanical ſcience to aſcertain the ſeveral ſpecies, he has added a ſet of plates for illuſtration, copied from the excellent figures ſubjoined by Dr. Hunter to his valuable edition of Evelyn's Sylva. It will be ſeen that he has neglected thoſe minute parts in the repreſentation which belong to the Linnæan Syſtem, as it was his purpoſe only to aſſiſt the common obſerver in acquiring a viſual knowledge of each ſubject.

4 J. A.

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THE

WOODLAND COMPANION.

THE OAK.

QUERCUS ROBUR.—*Pl.* 1.

* *Fructification.* Barren flowers in a looſe catkin, each conſiſting of a bundle of chives, from 5 to 10 in the ſame cup. Fertile flowers in a bud on the ſame tree, each having an oval ſeed-bud, which becomes an acorn.

Specific character. Leaves deciduous, oblong, broadeſt towards the end, with ſharp indentations and rather blunt angles.

THE oak ſtands at the head of Britiſh timber-trees, as well on account of its utility, as

* In this, and all the future inſtances, the *fructification* is deſcriptive of the genus, or family, of the tree

as of the grandeur and majeſty of its figure. It arrives at a bulk equal, if not ſuperior, to that of any other tree of the foreſt; and by the vaſt arms which it throws out on every ſide, it forms a maſs which fills the eye of the ſpectator, and impreſſes him with gigantic ideas. Its rugged bark and jagged deep-green leaves add to its character of ruſtic and maſculine ſtrength.

The oak moſt delights in a rich ſtrong ſoil, in which it ſtrikes its roots to a vaſt depth. It loves hilly rather than boggy ground, and thrives beſt in large plantations. It is injured by cropping; whence may be eſtimated the miſchief annually done to this noble tree by the cuſtom of cutting large branches for the celebration of the 29th of May. It forms the largeſt head, and ſpreads in the moſt picturesque figure, when growing ſingly, as in parks and ornamental grounds; but it riſes with a tall and ſtraight

treated of, according to the Linnæan ſyſtem; the *ſpecific character* relates to the particular ſpecies or kind which is the ſubject of the article.

ſtraight trunk only in woods and cloſe plantations.

The uſes of the oak tree are very various, and comprehend almoſt every part of it. The acorns (which, in common with the nuts of other timber-trees, bear the name of *maſt*) are ſaid to have been one of the earlieſt foods of mankind; and in ſome of the warm climates they are ſtill in uſe for that purpoſe. With us they are valued as the food of ſwine, of which large droves are ſent to fatten in the oak woods in this kingdom during ſome weeks in autumn, when the ripe acorns begin to fall. Squirrels and other ſmall quadrupeds alſo partake of the repaſt, and lay up acorns for their winter ſtore.

Every part of the oak abounds in an aſtringent juice, which is applied to various purpoſes. The bark is particularly valuable on this account, which renders it the chief material for tanning leather. Oaks growing in hedge-rows, which ſeldom arrive to the ſize of timber-trees, owe great part of their

value to their bark. Before it is uſed, it is ground to powder; and the infuſion of it in water is by the tanners termed ooze. The ſmall twigs, and even the leaves of the oak may be applied to a ſimilar purpoſe. Galls, which are an excreſcence formed in the warm countries upon the leaves of a ſpecies of oak, by means of an inſect, are ſome of the ſtrongeſt aſtringents known, and are much uſed in dyeing, on account of their property of ſtriking a deep black, with the addition of vitriol of iron. The oak-apples, formed in the ſame manner upon our trees, poſſeſs a ſimilar property, in a ſmaller degree. Oak ſaw-duſt is the principal material uſed in dyeing fuſtians. It gives all the varieties of drab-colours and ſhades of brown, accordingly as it is managed and compounded.

But it is by the uſe of its wood that the oak has acquired its chief fame, and eſpecially for the important purpoſe of ſhip-building. This has made it ſo peculiarly the favourite of England, to whoſe naval glory it is ſuppoſed materially to have contributed.

tributed. Thus Pope, in his Windſor-Foreſt, ſpeaking of vegetable treaſures, ſays,

> Let India boaſt her plants, nor envy we
> The weeping amber and the balmy tree,
> While by our oaks the precious loads are borne,
> And realms commanded which thoſe trees adorn.

Oak-timber is fitted for this purpoſe, by its ſtrength and durability, and alſo by the property of not readily ſplintering, a circumſtance of much conſequence ſince the invention of cannon. Ships of war, therefore, if not entirely built of oak (which from the preſent ſcarcity of that timber is ſeldom done) have always their ſides planked with it. The crooked pieces of this wood procured from the bend of the branches are alſo uſed for the *knees*, by which the planks are held out and ſupported. Oak-timber is likewiſe preferred for many other ſervices of ſtrength. In houſe-building it is uſed for door and window frames, and for wall-plates. When more plentiful, floors and ſtair-caſes were alſo made of it. In machinery, no other wood is equal to it where

a great ſtreſs is to be borne, as in mill-work, ſteam-engines, and the like. It is uſed for the bodies of carts and waggons, alſo for gates, poſts, and ladders. In the country it is a common material for furniture, ſuch as tables, bedſteads, and cheſts of drawers; its durability being thought a compenſation for the difficulty of working it. The coopers employ it for their largeſt veſſels, and for well-buckets and water-pails.

The oak may be termed not leſs the poet's tree, than the artiſan's. Some of the firſt poets, antient and modern, have choſen it as an object either of direct deſcription, or of ſimile; and that, not only in its flouriſhing ſtate, but in its decay. Thus Lucan, in ſome very fine lines, has made an aged oak the compariſon of Pompey the Great, at the time of his conteſt for power with Cæſar, when, being little more than the ſhadow of his former fame, he ſtill excited awe by the remains of declining grandeur. Our Spenſer has given an original picture of the ſame kind in the fable of the Oak

and

and the Briar, in his Shepherd's Calendar, which, as being of true Engliſh growth, I ſhall copy.

There grew an aged tree on the green,
A goodly oak ſometime had it been,
With arms full ſtrong and largely diſplay'd,
But of their leaves they were diſarray'd:
The body big and mightily pight,
Throughly rooted, and of wondrous height;
Whylom had been the king of the field,
And mochel maſt to the huſband did yield,
And with his nuts larded many ſwine;
But now the gray moſs marred his rine,
His bared boughs were beaten with ſtorms,
His top was bald and waſted with worms,
His honour decay'd, his branches ſere.

February.

A more exact viſible repreſentation of the ſame object cannot be given, than by the figure of the old oak of Cowthorpe, Yorkſhire, which meaſures ſixteen yards in circumference within three feet of the ground, in Dr. Hunter's edition of Evelyn's Sylva.

THE BEECH.

FAGUS SYLVATICA.—*Pl.* 2.

Fructification. Barren flowers in a kind of catkin, each conſiſting of about 12 chives in a cup. Fertile flowers on the ſame tree, in a bud, changing into a hairy capſule with four valves and two ſeeds.

Specific character. Leaves oval, indiſtinctly ſerrated. Bark ſmooth, white.

THE beech is one of the moſt ſtately timber trees, and compoſes large woods in ſome parts of this country. It particularly delights in a chalky ſoil, where it will flouriſh and arrive at a great ſize, though the land has all the appearance of barrenneſs. When ſtanding ſingly or at large diſtances from other trees, it ſpreads in a round form to a wide extent, and forms a deep maſs of ſhade;

ſhade; but when drawn up in cloſe plantations, it riſes to a great height with ſingular elegance and airineſs. Its leaves are of a pleaſant green, and many of them remain on the trees during winter, after turning brown. No verdure, however, will thrive beneath its ſhade. The ſmoothneſs of its bark has from antient times tempted the rural lover to carve the favourite name upon it; a cuſtom recorded in various paſſages of the poets; and the opening of Virgil's firſt Eclogue repreſents the muſing ſhepherd as reclining under the ſhade of a ſpreading beech.

This is one of the glandiferous or maſt-bearing trees. Its nuts, when eaten raw, are apt to occaſion giddineſs and head-ache, but, when thoroughly dried and powdered, are ſaid to make wholeſome bread. They are, however, chiefly the food of deer and ſwine, and of ſquirrels, dormice, and other ſmall quadrupeds, which are numerous in the beechen woods. An oil expreſſed from them is uſed in ſome countries in place of butter.

The wood of the beech is brittle, and apt to decay; but, being eaſily wrought, it is much uſed for various domeſtic purpoſes. The poets, who celebrate the ſimplicity and frugality of the early ages, ſpeak much of the beechen cups and bowls, ſome of which received an extraordinary value from the hand of the carver. In our days, beech is a common material of the turner and cabinet-maker; the former uſing it for his larger ware; and the latter, for common chairs and other articles of furniture. It is, indeed, almoſt the only Engliſh wood employed by the London cabinet-makers. Its lightneſs cauſes it to be choſen for the handles of tools; and it is ſplit into thin ſcales for band-boxes, ſword-ſcabbards, and the like. It is a common wood for fewel, and, in ſome counties, is regularly grown in plantations for that purpoſe. The dried leaves of the beech make a very good ſtuffing for matreſſes.

THE

THE CHESNUT.

Fagus Castanea.—*Pl. 3.*

Fructification. As the beech.

Specific character. Leaves ſpear-ſhaped, with ſharp ſerratures; naked underneath.

This tree is uſually called the *Spaniſh Cheſnut*, as growing in the greateſt perfection in Spain and others of the warm countries in Europe. Many, however, think it an original native of this iſland; at leaſt it arrives to the full bulk of a timber-tree in our woods and groves. The appearance of an aged cheſnut is ſtriking and majeſtic. It throws out arms equal in ſize to thoſe of the oak, and they often ſpring in an angular manner, and thwart each other, ſo as to produce an uncommon effect. The deep furrows of the rugged trunk

trunk ſometimes form a kind of net-work by interlacing. The branches are richly clothed with long jagged leaves, of a pleaſant green, and the head is maſſy and ſpreading. In autumn the leaves fade to a gold yellow, affording a very conſpicuous variety of tinge in the woods. Few trees arrive at greater longevity. A cheſnut at Tortworth, in Glouceſterſhire, is proved to have ſtood ever ſince the year 1150, and to have been then remarkable for its age and ſize. The cheſnut tree thrives in almoſt all ſoils and ſituations, though it ſucceeds beſt in rich loamy land. Nothing will grow beneath its ſhade.

Among the maſt-bearing trees this may be reckoned the moſt valuable, ſince its nuts, by their ſweet and farinaceous quality, are rendered good food for man, as well as for other animals. The cheſnuts cultivated for their fruit are uſually grafted ones, called by the French *marronier*; and in many parts of the ſouth of Europe they afford great part of the ſuſtenance of the poor, who make bread of their flour. They

are

are alſo eaten as a delicacy at the beſt tables, either roaſted or ſtewed. In this country the fruit of the cheſnut is ſmall, and ſeldom comes to maturity; it is therefore left to the hogs and ſquirrels.

The wood of the cheſnut is ſtrong and durable, and is uſed for moſt of the purpoſes in which oak is employed. Some of the oldeſt buildings in London are ſaid to be timbered with cheſnut. The trunks, however, are often found decayed at the heart when they appear ſound externally; and the wood on working is apt to turn out brittle, and to ſeparate in roundiſh maſſes, which fault is termed being *cup-ſhakey*. It is preferable to any for making tubs and veſſels to hold liquor, as not being liable to ſhrink after being once ſeaſoned. The principal uſe of cheſnut wood among us is for hop-poles, of which it makes the ſtraighteſt, talleſt, and moſt durable. Being cut at an early age for this purpoſe, it is rare to ſee large cheſnut trees in our woods; but they are frequent ornaments of our parks and pleaſure-grounds.

THE

THE ELM.

ULMUS CAMPESTRIS.—*Pl.* 4.

Fructification. Flowers in cluſters, each having about five chives, ſucceeded by an oval bordered capſule, containing a ſingle roundiſh flattened ſeed.

Specific character. Leaves doubly ſerrated, unequal at the baſe. Bark of the trunk cracked and wrinkled.

THE common elm is a large timber-tree of great beauty and uſe. It grows to a great height, and at the ſame time, if permitted, throws out expanded arms, ſo as to cover a large extent with its ſhade. Hence it is often planted ſingly or a few together in village greens, where it affords both a majeſtic object, and a pleaſant ſummer ſhelter. The elm is however often ſeen trained to a vaſt height with a ſingle naked

naked trunk, which mode of rearing deſtroys its beauty, though it better fits it for a particular uſe. In this ſtate it is very common in hedge-rows, eſpecially in the neighbourhood of London. Elms are not frequent in woods or foreſts, but are generally planted in avenues or in other artificial ſituations. The diverſity in the form and ſite of elms is agreeably ſketched by Cowper, the poet, who, of all others, viewed natural objects with moſt taſte and correctneſs. He firſt mentions them as growing by the river's ſide.

——————There, faſt rooted in his bank
Stand, never overlooked, our favourite elms
That ſcreen the herdſman's ſolitary hut.
Taſk, b. 1.

Then they are ſeen encircling a cottage upon a hill.

'Tis perch'd upon the green-hill top, but cloſe
Environ'd with a ring of branching elms
That overhang the thatch. *Ib.*

Next, they form a walk or avenue.

——The grove receives us next;
Between the upright ſhafts of whoſe tall elms
We may diſcern the threſher at his taſk. *Ib.*

He

He alſo notices its hue, as of a deeper green than the aſh.

The elm beſt loves an open ſituation and a black clayey ſoil. It bears tranſplantation well. It does not injure the graſs beneath it; and its leaves are agreeable to cattle, and in ſome countries conſtitute a conſiderable part of their food. The antients made great uſe of elms properly trimmed as props or ſupports for their vines; and the poets frequently allude to the *marriage* of theſe diſſimilar plants, and the aid derived to the weak and fruitful vine by twining round the ſtrong ſtem of her huſband elm.

The wood of the elm is hard and tough, and uſeful for a variety of purpoſes. It is particularly ſerviceable for occaſions which require its being kept conſtantly wet; as in the keels and planking beneath the water-line of ſhips, mill-wheels and water-works, and eſpecially for water-pipes, the great demand for which is the cauſe of its frequency about London, and of the prac-

tice of training it without branches to a tall ſtraight trunk, which may admit of boring in long pieces. It is likewiſe uſed for axle trees, naves, gate-poſts and rails, floors, dreſſers, blocks, &c. and it is very fit for the carved and ornamental works belonging to architecture.

There are ſeveral varieties of the elm, differing in the roughneſs and ſmoothneſs of their leaves, and manner of growth. A dwarf kind is employed for making tall hedges or ſcreens in gardens or nurſery grounds.

A diſtinct ſpecies of elm, growing moſtly in the North of England, and Scotland, is that called the *Wych hazel* (Ulmus montana) from the reſemblance of its leaves to thoſe of the hazel. It is ſmaller and more branchy than the common elm; its boughs are more depending, and its leaves and ſeeds much bigger.

THE ASH.

Fraxinus Excelsior.—*Pl. 5.*

Fructification. Flowers with chives and pointals upon ſome trees, with pointals only upon others. Two chives in each flower. Seed-bud oval, compreſſed, changing into a long membranaceous ſeed-veſſel, containing a ſingle ſeed.

Specific character. Leaves generally winged, conſiſting of four or five pair of ſmall ones, ſerrated, with an odd one at the end.

The aſh is a tall tree, having a light thin foliage, which gives it a graceful appearance, eſpecially when contraſted with trees of greater maſs and depth of ſhade. It flouriſhes moſt in woods, but will alſo thrive well in good ſoils upon open ground. It runs its roots

roots a great way near the ſurface; which quality, together with the deſtructive property of its drippings, renders it injurious to herbage, and ſtill more to corn. When growing near water it ſometimes hangs down its boughs like the weeping willow. No tree is ſo often met with in ruins and upon antient walls, probably on account of the readineſs with which its winged ſeeds are borne by the wind. It inſinuates its roots far into the crevices of theſe old buildings, and thereby becomes an inſtrument of the deſtruction of what affords it ſupport. In like manner it faſtens upon looſe flaty rocks, and decorates them with its verdure. It is one of the lateſt trees in coming into leaf, and loſes its leaves early in autumn. The bunches of long ſkinny ſeeds, called keys, on the fertile trees, have a ſingular appearance. It is obſerved that while ſome aſh-trees bear great quantities of keys yearly, others ſeem never to bear any. The former, however, are naked of leaves and unſightly; whereas the latter abound in foliage, and are pleaſing objects. The bark is ſmooth

and light-coloured; the leaves dark green. A well-grown aſh is a handſome and elegant object, though all may not agree with the Roman poet in giving it the prize of beauty above all the natives of the foreſt. There are few which excel it in utility; for its wood, next to that of the oak, is employed for the greateſt variety of purpoſes. Thus our Spenſer, mentioning the particular uſes of a number of trees, characteriſes the aſh as

——————— for nothing ill.

It may be peculiarly termed the *huſbandman's tree*; for it is one of the principal materials in making ploughs, harrows, waggons, carts, and various other implements for ruſtic uſe: hence a proportional number of aſh-trees ſhould be planted in every farm. The toughneſs of its wood rendered it a favourite with the heroes of old for the ſhafts of their potent ſpears; whence it is poetically termed "the martial aſh." With us it is much employed in poles for various purpoſes, and alſo in ſpokes

ſpokes of wheels, tool-handles, and the like. Dairy utenſils are moſtly made of aſh. Its loppings make good fuel, and it has the quality of burning when freſh as well as dry, and alſo with little ſmoke. Its aſhes afford good pot-aſh. The bark of the aſh has an aſtringent quality, and is uſed in tanning calf-ſkin. Its leaves are eaten by cattle.

THE MAPLE.

ACER CAMPESTRE.—*Pl. 6.*

Fructification. Flowers, fertile and barren upon the ſame tree; the chives in both, eight in number. In the fertile, the ſeed-bud changes into two capſules united at the baſe, and terminating above in large membranous wings, with a ſingle ſeed in each.

Specific character. Leaves lobed, blunt, notched.

THE maple is a tree of no great figure, and with us chiefly grows in thickets and hedges as an underwood. It may, however, be trained to a conſiderable height. Its wood is ſoft and fine-grained, and is excellent for the turner's uſe, who can bring it to an almoſt tranſparent thinneſs. It excels beech for the purpoſe of making cups, diſhes, and the like; and is often

mentioned by the poets as the material of theſe utenſils in ruſtic and ſimple life. The beautiful variegation of its knots, however, has given it value in ornamental works; and the antient Romans, for their luxury of curiouſly-veined tables, prized the maple next to their famous citron-wood. Muſical inſtruments are alſo frequently made of maple. This tree grows very full of branches, which, from the opportunity they give of the lodgment of the rain water, is probably the cauſe of that diſpoſition to internal decay of which Spenſer accuſes it;

—— the maple, ſeldom inward ſound,

Cowper deſcribes it as

—— gloſſy-leaved, and ſhining in the ſun.

Its bark is furrowed and cork-like.

THE SYCAMORE.

ACER PSEUDO-PLATANUS.—*Pl.* 7.

Fructification. As the Maple.

Specific character. Leaves with five lobes, unequally ſerrated. Flowers in bunches.

THIS ſpecies grows to a larger ſize, and is more ſightly than the common maple. The name Sycamore, (Wild Fig,) is an improper one, and that of Greater or Broad-leaved Maple is more ſuitable. The Latin appellation *Pſeudo-Platanus* (Falſe Plane) well expreſſes its appearance. It is of quick growth, and flouriſhes beſt in open places and ſandy ground. It is not uncommonly planted in ſtreets, and before houſes, on account of its ſhade. It has alſo the property of being leſs injured by the neighbourhood

bourhood of the ſea, and the daſhing of the ſalt ſpray, than almoſt any other tree; and hence is often ſet in rope-walks in maritime towns. It comes early into flower, and uſually bears a vaſt profuſion of pendent light-green bunches or catkins, which make a handſome ſhow. The flowers ſmell ſtrong of honey, and afford much paſture to the bees. The foliage of the ſycamore ſoon loſes its ſpring verdure, and changes its hue. Cowper calls it

> ——————— capricious in attire,
> Now green, now tawny, and, ere autumn yet
> Have changed the woods, in ſcarlet honours bright.

Its wood is ſoft and very white, and hence proper for the uſe of the turner, who makes from it bowls, trenchers, and other utenſils. From its lightneſs, it is alſo occaſionally uſed for cart and plough timber.

If the ſycamore is tapped in the ſpring, it affords a ſweetiſh watery liquor which may be uſed to ſave malt in brewing, and will yield a ſugar upon inſpiſſation. Moſt

of

of the ſpecies of the maple, indeed, afford ſweet juices; but none ſo remarkably as the ſugar-maple, which is a very common native tree in North America, and from which large quantities of coarſe ſugar are made by the ſettlers in the inland parts.

THE

THE LIME.

TILIA EUROPÆA.—*Pl.* 8.

Fructification. Flowers with five petals and many chives; the ſeed-bud turning to a dry berry, or capſule, having five cells with a ſingle ſeed in each. Generally, only one ſeed comes to perfection, puſhing aſide the reſt.

Specific character. Flowers without a nectary, whitiſh. Leaves heart-ſhaped, ſerrated. A floral leaf to each bunch of bloſſoms.

THE lime or linden is one of the beauties among trees, and is rather cultivated on that account than for its utility. It grows ſtraight and taper, with a ſmooth erect trunk, and a fine ſpreading head inclined to a conical form. Its leaf is large, and its bark ſmooth. In a good ſoil it arrives at a great height and ſize, and becomes

becomes a ſtately object. But it is ſeldom viewed ſingle, and its chief glory ariſes from ſociety. No tree is ſo much employed for avenues, and for bordering ſtreets and roads. Some of the ſtraight walks of antient limes, which modern taſte has hitherto ſpared, are beautiful ſpecimens of the pointed arch made by the interſection of branches, which has been ſuppoſed tobe imitated in the Gothic architecture of cathedrals. In viewing one of theſe noble works of nature diſciplined by art, who will not exclaim with Cowper,

> Ye fallen avenues! once more I mourn
> Your fate unmerited, once more rejoice
> That yet a remnant of your race ſurvives.
> How airy and how light the graceful arch,
> Yet awful as the conſecrated roof
> Re-echoing pious anthems! while beneath
> The chequered earth ſeems reſtleſs asa flood
> Bruſhed by the wind.
>
> *Taſk*, b. 1.

The lime comes early into leaf, and its verdure is one of the firſt harbingers of ſpring beheld in great towns, where it often decorates the ſquares and public walks. Its flowers are highly fragrant, and are very

attractive to the bees, which gather much honey from them. An infusion of them is said to make a pleasant tea. The sap of the tree contains sugar. Lime wood is soft and light, and therefore only fit for uses requiring little strength. It is used by shoemakers and leather-cutters to cut leather upon, as not being liable to turn the edge of their knives. The closeness of its grain, joined with softness, and the property of not being readily attacked by the worm, has caused it to be chosen by carvers for the rich ornamental work with which churches and palaces were formerly decorated. Mr. Evelyn mentions it as the material employed by the celebrated artist Gibbon for his beautiful festoons and other sculptures. It makes good charcoal for designers. Its inner bark, soaked in water, yields a fibrous matter fit for ropes and fishing-nets. The Russia mats, and the bark shoes of the peasants, are made of this material.

THE

THE HORSE CHESNUT.

ÆSCULUS HIPPOCASTANUM.—*Pl.* 9.

Fructification. Flowers in a long ſpike, each having five petals, ſeven chives, and one pointal: ſeed-bud changing into a ſpinous capſule of three cells, with two ſeeds in each, ſome of which are abortive.

Specific character. Leaves blunt-ſpear-ſhaped, ſerrated, growing by ſevens on one ſtalk, the middle one largeſt.

THIS tree, which is originally a native of the Eaſt, has not very long been naturalized in England. Its introduction here has been ſolely owing to its beauty, in which, at the flowering ſeaſon, it certainly excels every other tree of its bulk that bears our climate. In early ſpring it puts forth large buds, which burſt into verdure

dure among the firſt greens that enliven the year; and its ample palmated leaves have an appearance both uncommon and handſome. Not long after, it puts forth its long upright ſpikes of white and variegated flowers, generally in ſuch number as to cover the whole tree, and give it the reſemblance of one gigantic *bouquet*. No flowering ſhrub is rendered more gay by its bloſſoms than this tall tree; hence it combines beauty with grandeur, in a degree ſuperior to any other vegetable of theſe climates. The head is alſo ſhapely and regular in its growth, and well adapted to the ſymmetry required in walks and avenues. It has the defect of changing and loſing its leaves early in autumn, the natural conſequence of its early ſpring verdure. It is alſo accuſed of not well reſiſting tempeſtuous winds. The wood of the horſe cheſnut is of little value; it is, however, of ſome uſe to the turner. Its fruit or nuts are of a farinaceous quality, but ſo bitter as to be unfit for human food. Deer are ſaid to be fond of them, and ſheep will eat them; and when boiled, they

they have been uſed to fatten poultry. When left to decay they turn into a kind of gelly, which has been employed like ſoap in waſhing linen. The bark has conſiderable aſtringency, and may be employed for tanning leather.

THE

THE HORNBEAM.

CARPINUS BETULUS.—*Pl.* 10.

Fructification. Barren and fertile flowers in catkins upon the ſame tree. The barren, with from eight to ſixteen chives in each: the fertile, with two ſeed-buds each, changing into nuts.

Specific character. Leaves oval, pointed, ſharply ſerrated. Bark ſmooth, white.

THE hornbeam is not commonly found as a timber-tree, though it may be reared for this purpoſe, and will grow to a great height, with a fine ſtraight trunk. It thrives well upon a cold ſtiff clay, on the ſides of hills, bears lopping and tranſplanting, and is capable of reſiſting the wind. It is, however, principally cultivated as a ſhrub and underwood, and is excellent for forming tall hedges or ſcreens in nurſery-

grounds or ornamental gardens. It is of quick growth, and has a gloſſy verdure which is very pleaſing to the eye. It keeps its leaves long, and even all the winter when ſheltered. The wood of the hornbeam is very white, tough, and ſtrong. It is uſed for yokes, handles for tools, and cogs for mill-wheels, and is much valued by the turner. The wood is very inflammable, and will burn like a candle, for which purpoſe it was antiently employed. The inner bark is much uſed in the North of Europe for dyeing yellow.

THE

THE HAZEL.

CORYLUS AVELLANA.—*Pl.* 11.

Fructification. Barren flowers in a long ſcaly catkin, each flower of eight chives. Fertile flowers on the ſame tree in buds, diſtant, each flower with two ſhafts, the ſeed-bud changing to a nut.

Specific character. Leaves oval, ſerrated, wrinkled; props or ſtipulæ oval, blunt.

THOUGH the hazel does not arrive at the bulk of a timber-tree, it is on ſeveral accounts worth notice among the natives of the foreſt. Its male catkins, of a yellowiſh green, are among the firſt appearances in the year of vegetable expanſion, generally unfolding in the month of January. Its fruit-bearing buds make a beautiful ſhow

in March, when they burſt, and diſcloſe the bright crimſon of their ſhafts. The hazel is met with native in almoſt every part of this iſland, forming hedges or coppices, and thickening the approaches of woods. If ſuffered to attain their full growth, they ſhoot into poles of twenty feet in length; but they are uſually cut down ſooner, in order to form walking-ſticks, fiſhing-rods, ſtakes, hurdles, and the like, or for burning into charcoal. Hazel-charcoal is preferred to any other by painters and engravers, for the freedom with which it draws, and the readineſs with which its marks can be rubbed out. The nuts of the hazel are a generally agreeable fruit. They abound in a mild oil, which may be extracted by expreſſion, and is uſed by painters for mixing with their colours. Nuts, however, are difficult of digeſtion, and, when eaten in large quantities, often prove hurtful. They ripen ſoon after harveſt; and Thomſon gives an animated picture of the amuſement of gathering them, uſually termed *nutting*.

Ye

Ye ſwains, now haſten to the hazel-bank,
Where, down yon dale, the wildly-winding brook
Falls hoarſe from ſteep to ſteep. In cloſe array,
Fit for the thickets and the tangling ſhrub,
Ye virgins, come. For you their lateſt ſong
The woodlands raiſe; the cluſtering nuts for you
The lover finds amid the ſecret ſhade;
And, where they burniſh on the topmoſt bough,
With active vigour cruſhes down the tree,
Or ſhakes them ripe from the reſigning huſk.

Autumn.

They are a favourite food of ſquirrels, which lay them up in their winter hoards, and always take care to pick out the beſt. It is a common obſervation, that a plentiful year for nuts is the ſame for wheat.

The filbert is a variety of the common nut, diſtinguiſhed by a longer fruit, and a thinner ſkin. It is cultivated in plantations in the Kentiſh orchards, and yields a valuable product.

THE WALNUT.

JUGLANS REGIA.—*Pl.* 12.

Fructification. Barren flowers in an oblong catkin, each flower having many chives. Fertile flowers upon the ſame tree, growing by twos or threes, each ſucceeded by a large round fleſhy capſule containing one nut.

Specific character. Leaves ſmall, oval, ſmooth, equal, ſet in pairs, with an odd one at the end.

THE walnut, though not a native of our woods, is in many parts planted ſo freely, and ſo well perfects its fruit and timber, that it may be conſidered as fairly naturalized among us. It loves a rich loamy ſoil, but will grow well on ſtony ground, if the ſtaple be chalk: hence it is found to thrive on the chalky downs of Surrey, where

where large plantations of it have been made. The tree arrives at a reſpectable ſize, and makes a good figure either ſet in rows or growing ſingly, though it has the defect of getting its leaves very late, and ſhedding them early.

As a timber-tree the walnut was formerly in greater requeſt than at preſent, when its place is moſtly ſupplied by foreign woods. It has been much uſed by cabinet-makers for bedſteads, chairs, tables, and bureaus, for which purpoſes it is one of the moſt durable woods of Engliſh growth; alſo for wainſcots, and ſtocks for guns. The wood near the root is often beautifully veined, and fit for inlaying and ornamental works. The black Virginia walnut, however, excels our own for theſe uſes. It is for the ſake of the fruit that the walnut is chiefly cultivated among us. This is one of the moſt grateful of the nut kind, and forms a welcome addition to deſſerts at all tables as long as it continues freſh and moiſt. It contains much oil, which, like that of the common nut, may be ſepa-

rated by expreſſion, and is uſed by painters and varniſhers, and, in ſome countries, alſo for food, inſtead of butter. The unripe walnuts, with their green fleſhy coat upon them, are commonly uſed as a pickle. A ſyrup made with them is a vulgar medicine againſt worms; and decoctions of the huſks and leaves, which are ſtrongly bitter and aromatic, are ſometimes poured upon walks and graſs-plots in order to kill the earth-worms and grubs.

Thoſe ſingular vagrants, called Gipſies, ſtain their ſkins of a tawny hue with the juice of green walnut huſks.

THE

THE WILD CHERRY.

PRUNUS CERASUS.—*Pl.* 13.

Fructification. Flowers with five petals, from twenty to thirty chives, and one pointal: ſeed-bud changing to a pulpy fruit, containing one nut or ſtone.

Specific character. Umbels of flowers on ſhort foot-ſtalks: leaves oval-pointed, ſerrated, ſmooth, often doubled together.

THOUGH the wild black cherry is not a common tree in our woods, yet it may claim the rank of a native, ſince it is met with in ſeveral counties, of a large ſize, and propagates itſelf. Young plants of it are often found within the hollow trunks of old willows, into which the ſtones have

been dropt by birds. Its appearance in ſpring, when covered with white bloſſoms, is very beautiful: hence it makes a pleaſing ornament in parks and pleaſure-grounds, and forms an agreeable variety among other tall trees, few of which make any ſhow with their flowers. It thrives well in light poor land, and particularly loves a ſandy ſoil and elevated ſituation. The fruit, though ſmall, is pleaſant to the taſte, and gives a fine flavour to ſpirits. The wood is hard and tough: it is much valued for hoops of caſks; and is alſo uſed by the turner and cabinet-maker, and is ſtained, ſo as to reſemble mahogany. It makes excellent ſtocks for engraſting the garden cherries upon; being, indeed, the original of all the cultivated ſorts. The gum which exudes from it is equal in its properties to gum-arabic.

THE WHITE-BEAM.

CRATÆGUS ARIA.—*Pl.* 14.

Fructification. Flowers with five petals, about twenty chives, and two pointals, ſucceeded by a round berry containing two or four ſeeds.

Specific character. Leaves oval, unequally or doubly ſerrated, woolly on the under-ſide.

THIS tree has a general whiteneſs or mealineſs in its appearance, which has given it its name. It grows to a moderate ſize, and loves dry and open ſituations. It is found on the chalky hills of Kent, Surrey, and Suſſex, and alſo in the mountainous parts of Derbyſhire, where it ſhoots from

the fiſſures of the naked rocks. The fruit is eatable when mellowed by the froſts. The wood is tough, hard, and ſmooth, and is fit for axles, wheels, walking-ſticks, and tool-handles.

THE

THE WILD SERVICE or SORB.

CRATÆGUS TORMINALIS.—*Pl.* 15.

Fructification. As the former.

Specific character. Leaves with ſeven angles, the lowermoſt lobes ſtanding wide.

THIS ſpecies, alſo called the *Maple-leaved Service*, grows in various parts of England, chiefly upon ſtrong ſoils. In Hertfordſhire large trees of it are met with. Its fruit ripens late in autumn, and is then brown; and if kept till ſoft acquires an agreeable acid taſte, and is eaten; though from the Latin trivial name of *torminalis*, (griping,) it may be concluded that it is not very favourable to the bowels. Few of the native fruits of this climate can boaſt of a much ſuperior quality.

THE

THE HAWTHORN.

CRATÆGUS OXYACANTHA.

(MONOGYNA of *Withering*.)

OF this well known ſpecies, called alſo the White-thorn, it is unneceſſary to ſay more by way of deſcription, than that it is diſtinguiſhed from the reſt by its trifid leaves, and by its flowers having but a ſingle pointal. Its fruit, the haw, is like that of the two former kinds, but ſmaller.

Although the hawthorn is rather a ſhrub than a tree, it well deſerves notice among our foreſters. From the cloſeneſs of its growth, and its furniture of ſharp thorns, it is univerſally preferred for making live fences or quick hedges; and the peculiar richneſs of the extenſive proſpects in England is much owing to the frequency of the encloſures made by this plant, which affords a de-

a delightful verdure. Its flowers, likewiſe by the name of May, decorate that month particularly with a profuſion of beauty united with fragrance. Its ſcarlet berries greatly contribute to enliven the winter. The hawthorn, planted ſingly, acquires a reſpectable ſize, and is a fine object in the flowering ſeaſon. Its wood is tough and ſtrong, and is fit for axle-trees and tool-handles.

THE QUICKEN TREE.

SORBUS AUCUPARIA.—*Pl.* 16.

Fructification. Flowers with five petals; about twenty chives; and three pointals; succeeded by a round berry with three seeds.

Specific character. Leaves winged; seven or eight pair of small ones, spear-shaped, serrated, with an odd one at the end. Flowers white, in large bunches. Berries soft, red.

THIS tree is better known by the name of the *Mountain Ash*; and in the north of England by that of the *Rowan-Tree*. It is properly a species of the service or sorb. In the southern counties it is generally regarded as a shrub or underwood; but in the north, where it is permitted to grow at

pleasure,

pleaſure, it arrives at a conſiderable ſize. It is chiefly valued as an ornamental addition to plantations, on account of the elegant lightneſs of its foliage, and the beauty of its red berries, which remain on the tree during the whole winter. It will thrive in any good ſoil, but delights moſt in a hilly ſituation. The wood is tough and ſolid, and is valued by the wheel-wright and tool-maker. When bows were in uſe, it was regarded as next to the yew for making thoſe weapons. The berries will make a fermented liquor, and are ſometimes added to malt in brewing. When dried and powdered, they afford a kind of wholeſome bread. Thruſhes are exceedingly fond of them; and in hard winters reſort in numbers to the quicken trees, from which they can ſcarcely be driven away. When the ſuperſtitious belief in witchcraft prevailed, the wood of this tree was ſuppoſed to be a preſervative againſt its effects.

THE WHITE POPLAR, or ABELE.

POPULUS ALBA.—*Pl.* 17.

Fructification. Male and female flowers upon ſeparate trees. The male in an oblong catkin, each flower without petals, and conſiſting of eight chives. The female, in a catkin, without petals, having a ſeed-bud changing into an oval capſule, which contains ſeveral ſmall feathered ſeeds.

Specific character. Leaves rounded at the baſe, tapering to a point, angularly indented, blackiſh green above, covered with a thick cottony down beneath.

THIS tree, which grows in woods and hedge-rows, and eſpecially in low moiſt ſituations, is very conſpicuous from the whiteneſs of its foliage.

The

The poplar, that with silver lines his leaf.

Task.

It is a quick grower, and bears cropping well, but its shade is unfavourable to pasturage. The wood is soft and white, and is used for floors, laths, and packing-boxes.

THE BLACK POPLAR.

POPULUS NIGRA.

Fructification. As the former.

Specific character. Leaves trowel-ſhaped, ſerrated.

THE name of *black* ſeems given to this ſpecies of poplar only in diſtinction from the *white*; for its leaves are a pleaſant green, and the tree has nothing dark in its appearance. The leaves are ſmaller than thoſe of the preceding, and more angular. The tree arrives at a greater ſize, and is, indeed, one of the talleſt and moſt ſtately to be ſeen, when arrived at full growth. It loves a rich ſoil in a moiſt ſituation, as the banks of rivers and the borders of meadows. It is a frequent tree in Lancaſhire and Cheſhire, where the long rows of poplars almoſt

almoſt conceal from view the low-ſeated towns and villages. From its great ſize, boards are ſawn from it very fit for flooring, which have the uſeful property of ſmothering rather than flaming, when a lighted coal falls upon them. The wood likewiſe is not apt to ſplinter. The bark is light like cork, and ſerves to buoy up fiſhermen's nets. Red ſubſtances like cherries are ſometimes found on the leaves, which are occaſioned by the puncture of an inſect.

THE ASP or ASPEN-TREE.

POPULUS TREMULA.

Fructification. As the preceding.

Specific character. Roundiſh leaves, angularly indented, and ſmooth on both ſides.

THIS ſpecies is remarkable for the conſtant tremulous motion of the leaves with the lighteſt breeze, which is owing to the length and ſlenderneſs of their foot-ſtalks. The leaves are ſmaller than thoſe of the laſt ſpecies. The tree is large, and grows freely in all ſituations. It is injurious to graſs; and its roots ſpread ſo near the ground, throwing out numerous ſhoots, that they ſuffer nothing elſe to grow near it. The wood is extremely light, white and ſoft. Beavers are particularly fond of its bark and young ſhoots.

Several

Several foreign kinds of poplar flouriſh well with us, and are introduced into plantations. The *Po* or *Lombardy poplar* has lately become a great favourite from its quick growth, and the eaſe with which it is reared in all ſituations. It is particularly planted in ſtreets and roads for the purpoſe of a ſcreen; and on the borders of nurſery-grounds, to ſhelter other plants. It grows in a very regular tapering form, its numerous branches ſpiring upwards into a cone. It makes a handſome figure in full foliage, but has too much of a broom-like appearance in the winter.

THE ORIENTAL PLANE.

PLATANUS ORIENTALIS.—*Pl.* 18.

Fructification. Male flowers very minute, in globular catkins. Female flowers, on the ſame tree, in ſimilar catkins, changing into balls of ſeeds, two or three often ſtrung upon one ſtalk, and hanging downwards.

Specific character. Leaves palmated.

THE OCCIDENTAL or VIRGINIA PLANE.

PLATANUS OCCIDENTALIS.

Fructification. As the former.

Specific character. Leaves lobed.

THE plane trees, as might be inferred from their trivial names, are foreigners, and ſtill rather the cultivated growth of our parks and gardens, than the ſpontaneous product of our woods. They are chiefly valued for their beauty, and the luxuriance of their ſhade. The oriental kind, originally a native of the warm climates of Aſia, was in prodigious eſtimation with the antients, as affording in the higheſt perfection that verdant canopy which is ſo grateful to thoſe who enjoy the open air in the heats of ſummer. It was conſecrated

as well to the refreſhment of the philoſopher in his academic groves, as to the pleaſure of the bacchanalian, who held his revels under its ſhade, and with appropriate gratitude fed its roots with wine. In thoſe countries it grows to be one of the talleſt and moſt ſpreading of trees. With us it ſeldom arrives at a capital ſize, though the ſmoothneſs of its trunk, and fullneſs of its large leaves, render it a ſtriking and conſpicuous object. The occidental plane is a native of North Americą, and is the moſt common here of the two. Both ſpecies delight in a moiſt ſituation, and are quick growers. They greatly reſemble each other, the difference being chiefly in the leaf, which in the oriental is palmated or fingered like the hand, in the occidental is divided into lobes. They have the property of annually throwing off their bark in ſcales.

THE

THE BIRCH.

BETULA ALBA.—*Pl.* 19.

Fructification. Barren flowers in a scaly catkin, each containing four chives. Fertile flowers, on the same tree, in a scaly catkin, each succeeded by a single seed.

Specific character. Leaves oval, tapering to a point, serrated. Bark white.

THIS is a tree of rather humble growth, but valuable for cloathing soils which are deserted by almost all other trees. These are the bogs and mosses, frequent in some parts of this kingdom, and still more in some countries of the North, as Sweden, Norway, and Lapland. The watery parts of forests which scarcely produce any grass, are often covered with a thick growth of these

theſe trees; and they will likewiſe aſcend the mountains, and mingle with the fir and mountain-aſh. A touriſt in Wales ſpeaks with much admiration of the light, airy, pendent birch, which occupies the higheſt parts of the hills, and ſhelters the cottages that dimly appear through its foliage. Its white bark contraſts with the black ſurface of the peat-moſſes, and enlivens ſcenes otherwiſe the moſt gloomy and deſolate in nature. The leaves are ſmall and elegant; the boughs finely divided into ſlender twigs. They are ſubject to a kind of diſeaſe, occaſioning the branches to throw out a vaſt number of ſuckers, in one part, which intermix ſo as to form a cloſe reſemblance of a rook's neſt.

The wood of the birch is of little value, and, except for fuel, is ſcarcely uſed but for hoops and women's ſhoe-heels. In the times of archery it was employed for arrows. "The birch for ſhafts," ſays our Spenſer. On account of its lightneſs, it is much employed for ſcaffoldings about London. Its ſmall branches or twigs are commonly uſed for

for beſoms. The bark is a very valuable ſubſtance to the northern people, who make various utenſils of it, and cover their houſes with it. It alſo makes good torches; for it abounds in a reſinous quality, which likewiſe gives it firmneſs and durability.

The ſap of the birch is an agreeably-flavoured, ſweetiſh liquor, well known as the baſis of one of our domeſtic wines. It is, however, neceſſary to add ſugar or honey in order to bring it to ferment properly. This juice is extracted by boring holes in the tree almoſt to the centre of the trunk, in the ſpring, as ſoon as the ſap begins to flow. The leaves of the birch poſſeſs an agreeable fragrance.

THE

THE ALDER.

BETULA ALNUS.—*Pl.* 20.

Fructification. As the birch, except that the female catkin is rounder, like a fir-cone.

Specific character. Fruit-ſtalks branched. Leaves nearly circular, ſerrated, clammy.

THIS tree is alſo a lover of moiſture, and flouriſhes in boggy ſituations, and by the ſide of rivers. It may be reared to a large tree; in which ſtate it muſt have been, in order to have afforded the firſt material for boats or canoes by its hollowed trunk, as mentioned by Virgil in his Georgics. With us it is more commonly planted for coppice-wood, to be cut down every ninth or tenth year for poles. The wood is chiefly valuable

luable for its property of remaining long ſound under water; whence it is uſed for water-pipes, and for piles to be driven into the ground in order to ſupport buildings in boggy ſituations. It is alſo employed for ſhoe-heels, clogs, and turner's work. Every part of the alder has an aſtringent quality. Its bark gives a brown dye, and is uſed by fiſhermen to ſtain their nets. With the addition of copperas it ſtrikes a black.

THE

THE WHITE WILLOW.

SALIX ALBA.

Fructification. Barren flowers in a tiled catkin, each having from two to five chives. Fertile flowers upon ſeparate trees, in a catkin, each ſucceeded by a capſule of one cell, containing ſeveral feathered ſeeds.

Specific character. Leaves ſpear-ſhaped, ſharp-pointed, ſerrated, downy on both ſides, the lowermoſt ſerratures glandular.

THE numerous willow tribe are for the moſt part aquatics. They differ much as to ſize; but are in general diſtinguiſhed by the length of their leaves, and ſlenderneſs and flexibility of their branches. The white willow is one of thoſe which arrive at the

the largeſt bulk. It is common in moiſt woods and hedges, and on the ſide of brooks and rivers, the courſe of which it often marks by its grey foliage, diſtinguiſhable at a diſtance by the eye of the traveller. The wood of this tree is very white, and takes a fine poliſh; whence it is in requeſt for milk-pails and other utenſils which require peculiar cleanlineſs. The bark of this and of ſome other ſpecies of willow is aſtringent, and will tan leather. It has been uſed medicinally as a ſubſtitute for the Peruvian bark in the cure of agues; a property happily ſuited to the ſituations in which theſe trees principally delight.

THE CRACK WILLOW.

SALIX FRAGILIS.—*Pl.* 21.

Fructification. As the former.

Specific character. Leaves oval-lanceolate, ſerrated, ſmooth, with toothed, glandular foot-ſtalks.

THIS ſpecies alſo grows to a pretty tall tree. Its name is derived from the brittleneſs of its branches, which, if ſtruck with the finger, break off at the year's ſhoot. It grows quickly, and will thrive in moſt ſoils. Its leaves are of a ſhining green on both ſides, and of great length; which give it an elegant appearance.

THE

THE WEEPING WILLOW.

Salix Babylonica.

Fructification. As the former.

Specific character. Leaves narrow-ſpear-ſhaped, ſmooth, ſerrated; branches pendulous.

This ſpecies is well known to the lovers of picturesque beauty, from that diſpoſition to hang down in long ſlender branches, which makes it an admirable accompaniment to a ſtill retired piece of water, with the melancholy character of which it is perfectly in uniſon. In miſty weather, drops of water are ſeen diſtilling from the extremities of its branches; which circumſtance has given it a name, and wonderfully aids its effect. The weeping willow grows to a large ſize, and attains a conſi-

derable age. One has lately been cut down, planted in his own garden by the hand of Pope, and ſaid to have been one of the firſt of its ſpecies introduced into the kingdom.

THE

THE SALLOW.

Salix Caprea.

Fructification. As the former.

Specific character. Leaves oval, wrinkled, downy beneath, waved, indented towards the upper end.

This ſpecies alſo grows to a conſiderable ſize. It delights in dryer ſoils than moſt of the willow tribe, and will thrive on the tops of hills. Its branches are brittle, ſmooth, and of a dark green. The catkins are very large and white, and much reſorted to by bees early in the ſpring. The flowering branches are gathered by children under the name of *palms*; and carried about on Palm-Sunday. The wood of the ſallow is uſed for fuel, and makes excel-

lent charcoal for gunpowder and drawing-pencils. It is alſo employed by turners; and of the ſmaller boughs hurdles are made. The bark is uſed by ſome northern people in tanning.

THE

THE OZIER.

Salix Viminalis.

Fructification. As the former.

Specific character. Leaves very long, narrow, pointed, almoſt entire, ſilky beneath; branches rod-like.

This ſpecies is the principal example of the ſhrub-willows, remarkable for their very long and flexible branches, which fit them for being woven into the different kinds of baſket-work. The ozier loves a moiſt ſituation, and is commonly planted by the ſides of rivers and ponds. It covers many of the river-iſlands of the Thames, and renders very profitable, ſpots which would otherwiſe be left waſte. It has the further value of ſtrengthening the banks of ſtreams, and preventing them from being waſhed away

by the force of the current. It is of very rapid growth, and when properly managed will afford an annual crop of twigs for the baſket-maker. There are ſeveral kinds of ozier; and ſome other ſorts of willow are trained and cropt for ſimilar purpoſes, according to the ſize of twigs required for different works.

There are many other ſpecies of willow beſides thoſe above enumerated, which however in properties all approach them more or leſs. Some dwarf kinds are met with as far north as almoſt any vegetables will grow, and dwindle in bulk till they become the very loweſt of trees or ſhrubs.

THE

THE SCOTCH FIR, or PINE.

PINUS SYLVESTRIS.—*Pl.* 22.

Fructification. Barren flowers in bunches, each with many chives united at the tips. Fertile flowers on the ſame tree in a cone, compoſed of ſcales, with two flowers in each; the ſeed-bud ſucceeded by a nut having a winged membrane.

Specific character. Leaves growing in pairs out of one ſheath; in their firſt growth ſolitary and ſmooth.

THE pine tribe form a large and important family in trees, diſtinguiſhed by their ſtiff, narrow, pointed leaves, generally evergreen, and of a dark hue, and their ſcaly cones. Some of them affect mountainous ſituations; others, bogs and ſwamps;

ſwamps ; and they often compoſe woods of vaſt extent, cloathing barren and deſolate regions unfit for human culture.

The ſpecies of pine now under conſideration is called with us the Scotch fir, becauſe it grows naturally in ſome parts of the Highlands of Scotland, perpetuating itſelf by the ſeedlings which come up from the fallen cones. It is, however, by no means peculiar to that country, but grows abundantly in the mountainous parts of Norway, Sweden, and Ruſſia, covering the ſides of the higheſt hills, often out of the reach of man. It will thrive in any temperate climate, and delights moſt in poor ſandy ſoils. When growing in a thick wood or grove, it is drawn up with a ſtraight naked trunk; but in an open ſunny expoſure it ſpreads out with wide branches. As the terminating buds only ſend forth ſhoots, it will not bear the leaſt clipping. Vaſt plantations of this tree have been made within the laſt thirty or forty years in various parts of the iſland, which will at leaſt anſwer the purpoſe of improving

improving the landſcape in naked and ſterile tracts, though it is ſuſpected that the timber will never be ſo valuable as that in the natural foreſts. No wood is at preſent uſed among us in a quantity approaching that of the fir; which, under the name of *deal*, is the principal timber employed about buildings, for flooring, planks, beams, rafters, and the like; alſo for the upper-deck works of men of war, and for various domeſtic purpoſes. It has the advantage of being cheap, light, and eaſily worked; but it ſplits readily, and is extremely inflammable. Deals are red, yellow, or white, according to their growth, or the different ſpecies of fir whence they are procured. Almoſt the whole of our conſumption comes from Norway, or the countries bordering the Baltic; the firs of our own growth being fit for little more than poſts and rails. Thoſe in the native foreſts of Scotland, indeed, are to be excepted, but theſe afford a ſmall ſupply.

Beſides the value of their timber, the

firs of various ſpecies yield the important products of turpentine, tar, and pitch. They abound in a reſinous juice, which, exuding from the tree in its natural ſtate, is turpentine. The ſame, when forced out by a cloſe-ſmothered fire, is tar; and this, thickened by boiling, becomes pitch. Roſin is the reſiduum of turpentine from which the eſſential oil has been diſtilled. From all theſe uſes, the fir may be called the *ſailor's tree* with as much propriety as the oak. Indeed, the earlieſt veſſels built for navigation were conſtructed with this material, and in the antient poets the *pine* is conſtantly employed as a metaphorical term for a *ſhip*. Even at preſent, the cheapneſs of fir timber in the north of Europe and America cauſes many veſſels to be built of it alone, which have the advantage of ſwimming light, though they ſoon decay.

The white inner rind of the Scotch fir is ground to powder and mixed with rye meal in order to make bread in ſeaſons of ſcarcity,

ſcarcity, by the poor inhabitants of Sweden and Norway.

Many other ſpecies of pine are now become common in our plantations. Of theſe we ſhall mention a few of the principal.

THE

THE SPRUCE FIR.

PINUS ABIES.—*Pl.* 23.

Fructification. As the former.

Specific character. Leaves ſolitary, awl-ſhaped, pointed, ſmooth, turned two ways.

THIS is a fine and large tree, growing plentifully in the mountain-woods of Norway, and valuable for its timber, which is ſaid to afford the white deal. From the green tops of this ſpecies is made the ſpruce-beer, ſo much eſteemed in America as a remedy for ſcorbutic diſorders.

THE SILVER FIR.

PINUS PICEA.—*Pl.* 24.

Fructification. As the former.

Specific character. Solitary notched leaves: cones pointing upwards.

THIS ſpecies grows to a ſtraight tall tree, and is one of the moſt ſightly of the kind. It receives its name from the hue of its leaves, which are of a full green in their upper ſurface, but, in the under, have two white lines running parallel to the mid-rib on each ſide, which give it a ſilvery appearance as viewed from below. The leaves in their form and manner of growth reſemble thoſe of the yew, whence it has been named the yew-leaved fir. The Latin appellation, *picea*, is borrowed from its

its being that whence tar or pitch is chiefly extracted. It is a native of Norway, and is said to yield the yellow deal. The cones grow to a great size, and soon shed their seeds.

THE

THE WEYMOUTH PINE.

PINUS STROBUS.—*Pl.* 25.

Fructification. As the former.

Specific character. Leaves, five growing out of each ſheath.

THIS ſpecies, a native of North America, where it is called the white pine, grows to the greateſt height of any of the tribe, often arriving to that of one hundred feet. It is therefore preferred to the reſt for maſts of ſhips; and our largeſt men of war are furniſhed with them from trunks of this pine collected in the yards of Nova Scotia. They were firſt cultivated in England by Lord Weymouth, whence they are generally known here by his

 name;

name; and they are now common in our plantations.

This tree has a ſmooth delicate bark, and its branches are well cloathed with leaves. Its long cones hang looſely down, and ſoon ſhed their ſeeds.

THE

THE LARCH.

PINUS LARIX.—*Pl.* 26.

Fructification. As the former.

Specific character. Leaves long, narrow, in bundles ſpreading like a bruſh, deciduous.

THIS tree, a native of the Alps and Apennines, has become a favourite with us, and is now extremely common in our nurſeries and plantations. In beauty of appearance, and durability of wood, it much ſurpaſſes the Scotch fir, and will thrive in ſoils and ſituations equally unpromiſing. Its leaves fall in the winter, but not till they are almoſt ready to be immediately ſucceeded by freſh ones. Some larches make a beautiful ſhow in flowering-time with the bright purple tips of their female buds.

Their branches have a tendency to hang downwards; and the trees, when they have room to ſpread, feather quite to the ground, forming an elegant cone of verdure. The wood is conſidered as almoſt unperiſhable in the countries where it is employed for timber. The larch is very reſinous, and yields the turpentine commonly called Venice.

THE

THE YEW.

TAXUS BACCATA.—*Pl.* 27.

Fructification. Barren flowers, without petals, conſiſting of many united chives. Fertile flowers, generally on a ſeparate tree, without petals, ſucceeded by a berry, ſucculent, globular, open at the end, containing one ſeed.

Specific character. Long, narrow, pointed leaves, growing near together. Bark reddiſh. Berries red.

THE yew is a native tree of this country, and is found in rocky and mountainous ſituations, where, though of ſlow growth, and moderate height, it ſometimes arrives at great thickneſs of trunk. It is, however, more commonly ſeen in a planted ſtate, particularly in church-yards, pro-

bably on account of its being an evergreen, and furniſhing boughs for the decoration of churches at the ſeaſon of Chriſtmas. This ſituation, and the gloomy darkneſs of its foliage, have cauſed it to be named "the funereal yew." It is, however, more celebrated for the antient uſe of its wood in making the moſt formidable weapon of our anceſtors, the long bow. Its toughneſs and elaſticity rendered it peculiarly fit for this purpoſe: Thus Spenſer characteriſes it as

> The eugh obedient to the bender's will.

Much force was, however, required in overcoming its reſiſtance, and the archer muſt have had a ſtrong arm

> ——— who drew,
> And almoſt joined, the horns of the tough yew.

It was commonly planted near houſes, both on account of its utility, and its fitneſs for being cut into thoſe artificial ſhapes which were formerly thought highly curious and ornamental. Pyramids, obe-

liſks,

liſks, birds and beaſts of yew decorated the court-yards of our country-houſes, and ſupplied matter of admiration to the gazing paſſenger. A better uſe of its obedience to the ſhears was made in the tall and impenetrable yew hedges, which ſheltered and protected the antient gardens. The yew, however, has always lain under the imputation of poſſeſſing noxious qualities. It is thought prejudicial to bees, and horſes and cows have been killed by eating quantities of its clippings. There are even inſtances of a ſmall doſe of the freſh leaves proving fatal to children to whom it was given as a remedy for the worms. The ſweet and viſcid berries are eaten without inconvenience. The wood is at preſent valued by cabinet-makers and inlayers on account of its beautiful red veins; and is alſo a good material for axles, cogs for mill-wheels, flood-gates for fiſh-ponds, and other works of ſtrength and durability.

THE

THE HOLLY.

ILEX AQUIFOLIUM.—*Pl.* 28.

Fructification. Flowers generally with four chives and four pointals on each, (but ſometimes the barren and fertile ſeparate,) ſucceeded by a berry with four cells and one ſeed in each.

Specific character. Leaves oval, pointed, thorny.

THE holly grows native in woods to the height of twenty or thirty feet; but we more uſually ſee it in gardens in the ſtate of a ſhrub. It is an evergreen, and by its ſhining leaves and red berries forms a principal decoration in the winter landſcape. Armed by nature in its own defence with thorns projecting from the indentations of the leaves, it has been ſelected

lected by man for the protection of his cultivated plants, and formed into hedges impenetrable to all the foes of the garden. Were it not for its ſlow growth, no native of this climate would be preferred to the holly for this purpoſe. Mr. Evelyn ſpeaks with rapture upon this ſubject. "Is there," ſays he, "under heaven a more glorious and refreſhing object of the kind, than an impregnable hedge of about four hundred feet in length, nine feet high, and five in diameter, which I can ſhow in my now ruined gardens at Say's Court, at any time of the year, glittering with its armed and varniſhed leaves; the taller ſtandards at orderly diſtances, bluſhing with their natural coral? It mocks the rudeſt aſſaults of the weather, beaſts, or hedge-breakers, *Et illum nemo impune laceſſit.*"

By the ſkill of the gardener numerous varieties are derived from the common or wild holly, diſtinguiſhed by the variegations of their leaves, and diſpoſition of their prickles. Some of theſe are very curious and beautiful, and afford rich ornaments to a ſhrub-

a ſhrubbery. The wood of the full-grown holly is valuable. It is the whiteſt of all our hard woods, and therefore uſed by inlayers, and is ſometimes ſtained black to imitate ebony. It is alſo excellent for the uſes of the turner, carver, and mill-wright, being extremely firm and durable. Birdlime is made of the green bark of the holly, firſt boiled, and then laid in a damp place to ferment, by which it is converted to a perfect mucilage or ſlime.

THE

THE BOX.

Buxus Sempervirens.

Fructification. Barren flowers with two petals and four chives. Fertile flowers in the ſame bud, with three petals and three ſhafts, ſucceeded by a roundiſh capſule with three bills and three cells, having two ſeeds.

Specific character. Leaves oval, thick, gloſſy. Bloſſoms greeniſh white.

The box is another evergreen tree or ſhrub, which is met with, though ſparingly, in a wild ſtate with us, but more commonly as planted in our gardens. Its rareneſs (probably owing to a foreign origin) may be inferred by its having given a name to thoſe ſpots where it is principally found; as Box-hill, in Surrey;

rey; Boxley, in Kent; and Boxwell in the Cotſwould in Glouceſterſhire. In all theſe places the box grows in woods or thickets; it is alſo plentiful upon the chalk hills near Dunſtable. A ſtony ſhallow ſoil, of the lime-ſtone kind, ſeems beſt to ſuit it. In old gardens it was much cultivated for the purpoſe of clipping into thoſe artificial forms which were once ſo much admired; and alſo for hedges. A dwarf kind is ſtill one of the commoneſt borderings of flower beds, and pleaſes the eye by its perpetual verdure. The wood of the box is of a pale yellow colour; and being very hard, ſmooth, and ſolid, is much valued for various purpoſes. The principal of theſe are the making of combs, mathematical rulers and other inſtruments, flutes, ſhuttles, and turnery wares. It bears a high price, and may be cut about every thirty years.

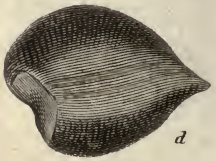
FINIS.

Wilk. and Taylor, Printers, Chancery Lane.

a. Male catkin.
b. Female flowers.
c The Nut.
d. The Cup.

a. Male catkin
b. Female Flower
c. Capsule opening
d. The Nuts

Beech



a. Male catkin.
b. Female Buds
c. Capsule opening.
d. Nut.

ut.)

Bye & Smith sculp.

El

a

b

a. *A Branch in Flower.*
b. *A Seed.*

a . Bunch of flowers.
b . A winged seed .
c . Seed naked .

Ash

Smith & Bye sc. No. 5 Surrey Str. Strand.

a
b
c

Maple

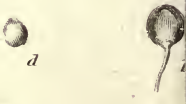
a. Male & hermaphrodite Flowers.
b. Two winged Seeds.
c. Seed naked.

a
c

a. Bunch of Flowers.
b. Two winged seeds.
c. Seed naked.

b

a. *Flowers with floral leaf*
b. *Capsule.*
c. *D°. cut transversly.*
d. *Seed.*



The Lime.

Horse

a. A bunch of Flowers.
b. The capsule of Nuts.

Chesnut.

a

Hornbeam

d

a. Male catkin.
b. Female D°.
c. Seeds in their place.
d. A single seed.

b
b

a. a. Male catkins.
b Female flower.

b
a
a

a. *Male Catkin*

b. *Female Flower*

Wallnut
b

Wild Bla

Cherry.

White B

a. Bunch of Flowers.
b. Berry entire.
c. Dº cut transversly.
d. Dº cut vertically.

a A.Berry

Wild Service

a. A berry cut transversly.
b. D° entire.

Qua

Engraved by Smith & Bye No. [illegible]

a. Male catkin,
b. Female Dº
c. Dº discharging its Seed.

White Popl

a

a. Male catkin.
b. Female Dº
c. Globe of Seeds.

Orienta

Plane

Smith & Ryo sc. No. 5 Surrey Str. Strand.

b
a
b
a

h.

a. Male catkin
b. Female D°.

Eyre & Smith, fe. Wm. & Henry Sw. Strand.

a. Male catkin.
b. Female D°.

b

a. Male catkin
b. Female D°

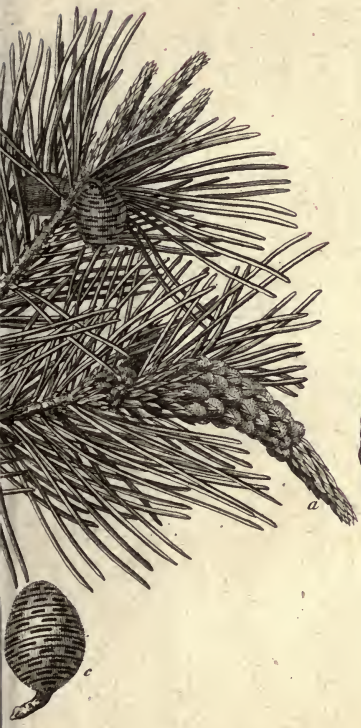
Crack

illow.

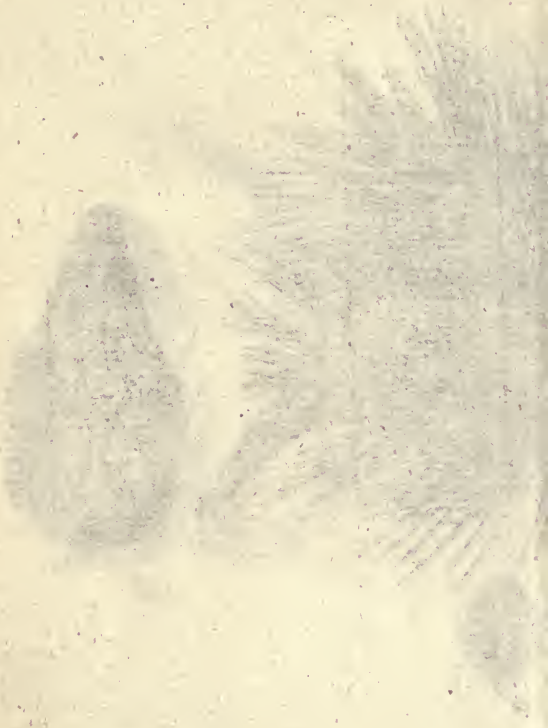
Smith & Rye, 5 No 5, Surrey Str. Strand

a. Male catkin.
b. The Gem or Winter lodge.
c. The future Cone.
d. A Cone opened shewing the Seeds.

Scots



Fir



a. Male catkin

b. Future Cone

Spruce Fir

Bye & Smith sc.

Silv

Pl. XXIV.

Fir

Bye & Smith sculp.

Weymouth Pine

a. Scale with two winged Seeds.
b. Simple seed.

a . *Male catkin*
b . *Immature cone*
c . *Female flower*

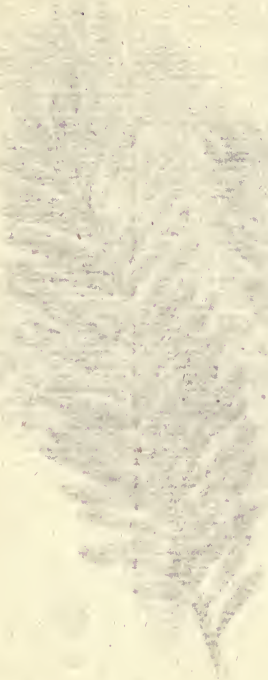
Larch

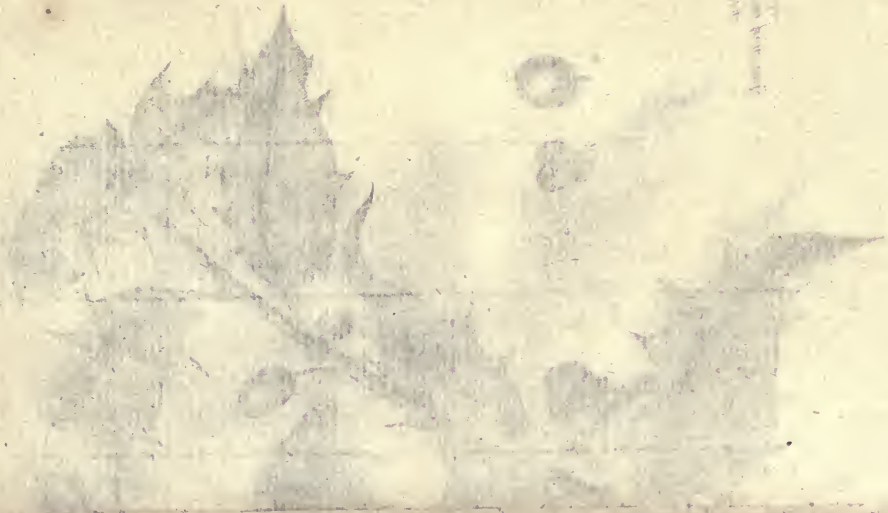
Pl. XXVI.

Bye & Smith sc. No. 5 Surrey Str. Strand.

Ye

a. Berry cut vertically.
b. Seed.





a. *Berry.*
b. *D^o cut transversly.*
c. *Seeds.*

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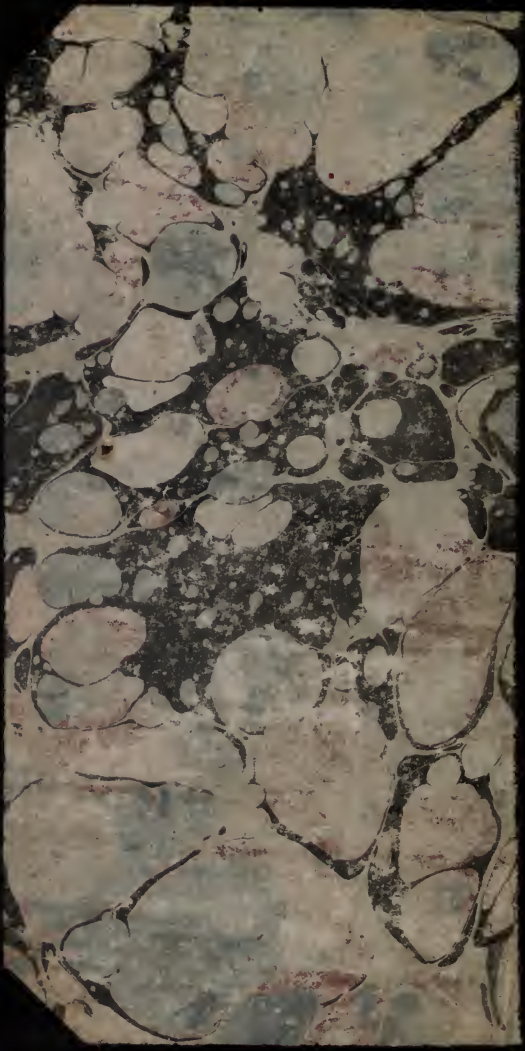

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